

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 2-8 and 17-24 are pending in the present application. Claims 23 and 24 are added by the present amendment.

In the outstanding Office Action, the Examiner requested the date of an article filed with an Information Disclosure Statement (IDS) on March 17, 2004; Claims 2-6, 8, and 20-22 were rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over Claim 1 of Hatakoshi et al. (U.S. Patent No. 6,587,494, herein "Hatakoshi '494") in view of Tanaka (U.S. Patent No. 5,808,973); Claims 2-4, 6, 8, and 20-22 were rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over Claim 2 of Hatakoshi et al. (U.S. Patent No. 6,687,277, herein "Hatakoshi '277") in view of Tanaka; Claim 7 was rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over Claim 1 of Hatakoshi '494 in view of Tanaka and Ito et al. (U.S. Patent No. 6,304,527, herein "Ito"); Claim 7 was rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over Claim 2 of Hatakoshi '277 in view of Tanaka and Ito; Claim 5 was rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over Claim 2 of Hatakoshi '277 in view of Tanaka and Kann et al. ("Heating mechanisms in a near-field optical system," Applied Optics, Vol. 36, No. 24, herein "Kann"); Claims 2, 7, and 20-22 were rejected under 35 U.S.C. § 103(a) as unpatentable over Tanaka and Ito; Claims 3, 4, and 8 were rejected under 35 U.S.C. § 103(a) as unpatentable over Tanaka, Ito, and Kobayashi et al. (U.S. Patent No. 4,840,922, herein "Kobayashi"); Claims 5 and 6 were rejected under 35 U.S.C. § 103(a) as unpatentable over Tanaka, Ito, and Hatakoshi et al. ("Polarization

Dependence Analysis of Optical Loss in Small-Aperture Metal Waveguide for Near-Field Optics,” International Symposium on Optical Memory 2000, herein “Hatakoshi”); Claims 6 and 8 were rejected under 35 U.S.C. § 103(a) as unpatentable over Tanaka, Ito, Mononobe et al. (WO98/10296, herein “Mononobe”); and Claim 5 was rejected under 35 U.S.C. § 103(a) as unpatentable over Tanaka, Ito, and Kann.

Regarding the request of the outstanding Office Action to provide a date of the article filed with the last IDS, Applicants respectfully submit that the article states the date of September 2000 in the upper most line of the first page.

Regarding the rejections of the claims under the judicially created doctrine of obviousness-type double patenting, Applicants file together with the present amendment a Terminal Disclaimer as suggested in the outstanding Office Action. Accordingly, it is respectfully submitted those rejections are moot.

Claims 2, 7, and 20-22 were rejected under 35 U.S.C. § 103(a) as unpatentable over Tanaka and Ito. That rejection is respectfully traversed.

Briefly recapitulating, independent Claim 2 is directed to a thermally-assisted magnetic recording head having a laser device, a light absorbing film provided with an aperture, and a magnetic pole. The aperture is adapted so that a polarizing direction of a light emitted from the laser device is approximately perpendicular to a direction along a longitudinal extension of recording tracks formed on a recording medium, a width W1 of the aperture taking along the polarizing direction is smaller than a width W2 of the aperture taken approximately perpendicular to the polarizing direction, and the width W1 is shorter than $\frac{1}{2}$ of a wavelength at the center of the spectrum of the light emitted from the laser device. Independent Claim 21 recites similar features as independent Claim 2.

Turning to the applied art, Tanaka discloses a magnetic recording apparatus having a laser and a layer that has a “small and substantially circular light transmitting hole.”¹ However, Tanaka is silent about the dimensions of the hole and whether the hole is adapted so that a polarizing direction of a light emitted from a laser device is approximately perpendicular to a direction along a longitudinal extension of recording tracks formed on a recording medium, as required by independent Claims 2 and 21. In addition, because the hole in Tanaka is circular, there is no orientation of the hole relative to the polarized light.

The outstanding Office Action relies on Ito for teaching a probe having an aperture with the claimed features that are missing in Tanaka. However, Ito does not teach or suggest that the aperture is adapted so that a polarizing direction of a light emitted from a laser device is approximately perpendicular to a direction along a longitudinal extension of recording tracks formed on a recording medium, as required by independent Claims 2 and 21.

Thus, at least for this reason, independent Claims 2 and 21 and each of the claims depending therefrom patentably distinguish over Tanaka and Ito, either alone or in combination.

In addition, Applicants respectfully submit that there is no motivation or suggestion to combine Tanaka and Ito as suggested in the outstanding Office Action.

As stated in MPEP §2142:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

¹ Tanaka, column 6, lines 5-7.

The outstanding rejection does not meet the three basic criteria noted above. First, no suggestion or motivation has been noted in either Tanaka or Ito to meet the claim limitations. Moreover, as discussed above, Tanaka teaches a circular hole, which clearly does not suggest an aperture having different first and second widths. In addition, Ito shows a variety of apertures having arbitrary shapes.² Thus there is no motivation or suggestion to modify a circular hole in Tanaka. Secondly, there is no expectation provided in the references that a modification of the hole in Tanaka would lead to any benefits of the thermally assisted magnetic recording head.

MPEP §2143.01 goes on to note that a statement that a modification of the prior art to meet the claimed invention would have been well within the ordinary skill of the art at the time the claimed invention was made ... is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings (modify the teachings) of the references. That is clearly not the case in the outstanding rejection.

In such ways, it is respectfully submitted that no *prima facie* case of obviousness has been established in that respect.

Further, the device of Claims 2 and 21 achieves a precipitous distribution of a near-field light as shown in Figures 4A and 4B and disclosed in the specification at page 26, lines 15-22. Because of the precipitous distribution of the near-field light of the claimed device, a wave propagation mode can be implemented with a low loss even with a minute aperture having a size equal to or less than a wavelength of the light. Therefore, the claimed device advantageously achieves a reduced loss of light due to a penetration into a metal surrounding of the aperture and a light collection efficiency is enhanced.

² Ito, column 2, line 60, to column 3, line 2.

Furthermore, Applicants respectfully submit that without improper hindsight reconstruction, a person of ordinary skill in the art would not be motivated to perform the modification proposed by the outstanding Office Action. In re Roullet, 149 F.3d 1350 sets forth criteria for being certain that impossible hindsight is not being used to deprecate an invention.

To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner *to show* a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, ***confronted with the same problems as the inventor and with no knowledge of the claimed invention***, would select the elements from the cited prior art references for combination in the manner claimed. [emphasis added]

In the present case, the outstanding Office Action identifies no common problem confronting the skilled artisan by which the artisan would have selected certain elements of Tanaka to combine with Ito.³ Therefore, it is respectfully submitted that the outstanding Office Action has failed to establish a *prima facie* case of obviousness.

Accordingly, it is respectfully submitted independent Claims 2 and 21 and each of the claims depending therefrom patentably distinguish over Tanaka and Ito.

Regarding the remaining rejections on the merits, Applicants respectfully submit that none of Kobayashi, Hatakoshi, Mononobe, and Kann overcomes the deficiencies of Tanaka and Ito discussed above. Accordingly, as none of the cited references teaches or suggests the features recited in independent Claim 2, from which Claims 3-8 and 20 depend and the features of independent Claim 21, from which Claim 22 depends, it is respectfully submitted that Claims 3-8, 20, and 22 patentably distinguish over the cited references.

New Claims 23 and 24 have been added to set forth the invention in a varying scope and Applicants submit the new claims are supported by the originally filed specification. In

³ See MPEP 2141, stating, as one of the tenets of patent law applying to 35 USC 103, that "[t]he references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention."

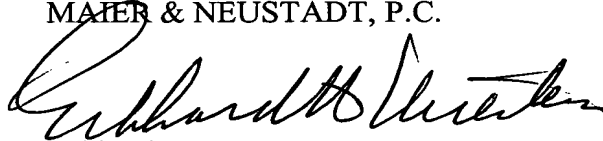
particular, new Claims 23 and 24 depend from independent Claims 2 and 21, respectively.

No new matter has been added. Accordingly, it is respectfully submitted that new Claims 23 and 24 are allowable for similar reasons as discussed above.

Consequently, in view of the above discussion and in light of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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